

[DOCUMENT] ABSTRACT

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[PURPOSE]

In a method for manufacturing a crystalline silicon film by utilizing a metal element that promotes the crystallization of silicon, an influence of this metal element can be suppressed.

[STRUCTURE]

A nickel element 104 is retained in contact with a surface of an amorphous silicon film 103 patterned to form a predetermined pattern. in such a manner that the metal element is brought into contact with the amorphous silicon film 103 patterned to form a predetermined pattern. Next, the crystalline silicon film 105 is formed by a heat treatment. At this time, the nickel element is segregated in the edge region of the pattern. Further, a crystalline silicon film 100 having no region to which the metal element concentrated by patterning using a mask 107. By using this crystalline silicon film 100 as an active layer, the thin film transistor is fabricated.

[SELECTIVE FIGURE] FIG.1